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ABSTRACT

Track and field activities involve the basic skills of running, jumping, and throwing. With the exception of the relays, all of the events are individual and self-testing in nature, and demand ample opportunity for practice. Track and field is often considered a team sport, since the individuals involved belong to a team and their wins are recorded for a team. Track events are described along with suggestions for conducting a track meet. (CJ)

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TEAM SPORTS - TRACK AND FIELD

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U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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FOREWORD

Physical education is an important part of the total educational program and can make a great contribution to the lives of our boys and girls. The education of the children of the state, not only for making a living, but for living, requires a well planned health and physical education program.

Children need physical education more today than ever before because of the changes from rural to urban living, automation, less natural play space, crowded schools, the anxieties and pressures of society, and the fast pace of the world in which they live. Elementary children need to build a strong foundation in physical fitness, develop skills in physical activities, cultivate the ability to make social and emotional adjustments and acquire knowledge of the role that health and physical activities play in their lives.

Physical education must help prepare children to live a full and happy life. In some elementary schools in the state, physical education is taught by the classroom teacher. However, many physical education specialists have been added during the past few years.

This guide was prepared by Vi Barls, Assistant Professor, School of Health, Physical Education, and Recreation, University of Nebraska-Lincoln and Wauneta Peterson, Elementary Physical Education Specialist, Belmont Elementary, Lincoln Public Schools under the supervision of JoAnne Owens, Consultant for Health/Physical Education, Curriculum Division of the Nebraska Department of Education.

The State Department of Education is pleased to present this curriculum guide, which is structured to show a variety of activities by grade level in order to facilitate its use by both the regular classroom teacher and the physical education specialist in preparing a program for the elementary schools of Nebraska.

M. Anne Campbell
Commissioner of Education

THE HISTORY OF TRACK AND FIELD

Track and field includes activities as old as basic human movements. The competitive events of today undoubtedly grew from the first men who gained pleasure in running, leaping over streams and fallen trees, and throwing rocks and spears. These survival skills turned to sport as man became less dependent on them for existence.

Games involving the fundamentals of track and field were first formulated by the Greeks during their Golden or Homeric Age. The most famous of these games were the Olympics which began in 776 B.C. and continued to be held every four years until 392 A.D., at which time they were abolished by the Romans. In 1896 they were reorganized again by Pierre de Coubertin of France, and since that time they have been conducted as an international festival. One of the strong movtivations behind our whole national sports program is the meeting together every four years of the many champions of the various countries of the world. With the exception of distance running, United States Olympic teams have done well in all track and field events.

Track and field activities involve the basic skills of running, jumping, and throwing. Most children love to do these activities and are excited when track and field is in season, which is usually in the spring. This is sometimes considered a team sport, since individuals usually belong to a team, and the individual wins are recorded for a team. With the exception of the relays, all the events are individual and self-testing in nature and demand that a child have ample opportunity to practice them in order to improve.

In recent years there has been a revival of interest in track and field for both boys and girls across the United States. Many children have an opportunity to participate in track clubs and meets outside of the school.

GENERAL SUGGESTIONS:

1. Since most of the events are the basic skills of running and jumping, they are learned and performed in the primary grades but on a more informal basis. For example, the running broad jump is call Jump the Brook. Children run and jump across two lines which are moved progressively farther apart. High jumping is called High Waters. A rope is held at increasingly higher levels, and more than one child jumps over it at a time. Jumping and running are performed in the grass, and no pits are used. Older boys and girls may run on a cinder or all-weather track if it is in good condition.
2. Spiked running shoes should not be permitted. Many light gym or running shoes are available and are quite suitable. Spiked shoes create a safety problem and also give an unfair advantage to children whose parents can afford them. Running in bare feet is not recommended.
3. Two wooden paddles or blocks of wood clapped together make a good starting signal.
4. Form should be stressed at all times, but appropriate to the individual. The child should be brought to the realization that good results in track and field are due to good form and diligent practice.
5. The amount of activity, particularly distance striking, should be built up progressively. A period of conditioning should precede any competition or all-out performance.

6. Warm-up activity consisting primarily of bending and stretching exercises should precede track and field work.

7. Distance running should be under control for children of this age.

8. Pits for long and high jumping must be maintained properly. They should contain sand, sawdust mixtures, or loose dirt for long jumping. For high jumping, mats by themselves or placed over secured inner tubes or tires are satisfactory. Commercial landing platforms are excellent but expensive.

9. The metal variety of high jump crossbars is economical in the long run. A satisfactory substitute can be made from rope, with a weight on each end to keep it taut and still allow it to be displaced. In Europe, small leather bags with shot are used as weights to keep the rope level.

10. Times and distances should be recorded two or three times during the unit. A child can visually and mentally record his progress during daily practice.

WARM-UPS:

Warm-up activities are important for all events. Jogging is an excellent way to begin. Jog at a tempo slightly faster than a walk. Swing arms freely and increase jogging pace. Light calisthenic exercises which stretch and relax the muscles are beneficial in preparing the body for increased movement and preventing strains and pulls. Bicycling, leg stretches, reaches, and torso bends should be included in the ten to twenty minute warm-up.

SAFETY:

1. Keep the feet under the body while running. Do not overlead with the chest and shoulders.
2. In high jumping, avoid landing on the back.
3. Avoid jumping on hard surfaces.
4. Practice the throwing events in an isolated area.
5. Take time to ready the jumping pits by spading and raking frequently to maintain softness.
6. When not in use, be sure all rakes are placed with the tines down.

TRACK FACILITY:

The presence of a track facility is a boon to the track program. Few elementary schools have the funds or space for a quarter-mile track. Discarded fire hose could be used to mark the curbs and could be installed each spring with spikes.

Diagram of a 1/8 mile track (220 yards)

Figure 1

The facility is one-eighth mile in length and has a straightaway of 66 yards in length, which is ample for the 60 yard dash. It allows flexibility in relays, since relays legs of 55, 110, and 200 yards are possible.

Sixth grade classes could profit in number concepts by helping lay out the track and calculating the distances from the dimensions, thus strengthening number concepts.

SUGGESTIONS FOR AN ELEMENTARY SCHOOL TRACK MEET:

Rules

1. Girls' events should be separate from those of the boys.
2. Each contestant should not enter more than three events.
3. All contestants must take part in conditioning exercises, including running and jumping, for at least three weeks before the meet.
4. The health record of each contestant should be checked before the meet.
5. Contestants should wear arm bands of distinguishing colors and name tags.
6. All spectators must stay away from starting and finishing lines, and student patrols should keep the areas cleared for each event.
7. A first aid station easily identified must be provided and be under the direction of a certified first aider.
8. Inexpensive ribbons or other rewards should be given to the winners.

Planning the Meet

Plans must be made for participants to sign for events ahead of the meet. Once they have signed, the children can practice in earnest. Score sheets can be drawn up, and a time schedule with names of participants can be made and posted ahead of the meet. Judges must be secured to time running events and conduct and measure the jumping events. One starter starts all running events.

Conducting the Meet

The referee is in charge of the meet. This may be the teacher in the class. He should read the events and the names of students who compete in them. The students also should know where they go for each event, and what to do when they have finished. The relays usually climax the meet. If a child is to be in a running event and a field event at the same time, he goes to the running event first. Field events usually take longer to conclude than running events. If there are fewer running lanes than there are people entered in the dash, there will have to be several heats. Only winners and runners-up of each heat participate in the final dash events.

Jumping events take a long time to complete. A minimum jumping height based on class records may be set as a qualification for entering a jumping event. In the high jump each participant is allowed three trials at each height. Should a tie occur, the person with the least number of misses for all trials is declared the winner. In all other jumping events three trials are given, and the one with the longest jump wins.

Participation

A limit is usually set on how many events one person may enter. Everyone may be in the relays and in two individual events. Each team may be required to enter two contestants in each event. The number in the meet sometimes dictates how this may be done. A child may enter the events he choses, or the teams as a whole may decide who will be best in what events.

Measurement

The running events are timed to the nearest tenth of a second. The timer starts the watch on the "Go" and stops it as the first foot or body part crosses the finish line.

The jumping events are measured by the field judges to discover distance covered. All lateral jumps are measured perpendicularly from the nearest break in the pit (it may be a hand if the jumper falls backward) to the board. The running jumps measure to the outer edge and the standing to the near edge of the board from the pit. Measurement in the high jump is from the ground to the upper edge of the crossbar at the center.

The throwing events are measured from the nearest mark made by the object thrown to the inner side of the toe board or line. Three trials are allowed with the best measurement counting.

False Starts

False starts are penalized by loss of one, then two yards. The third violation results in disqualification. Loss of time is the only penalty for a poor baton pass. Knocking over more than one hurdle or failing to take both feet over the hurdle results in disqualification.

Scoring

The times and disances determine the places. Points are awarded to the first three places: First place--five points, second place--three points, and third place--one point. Team scores are the total of individual and relay event points.

First place--5 points--blue ribbon
Second place--4 points--red ribbon
Third place--3 points--white ribbon
Fourth place--2 points--yellow ribbon
Fifth place--1 point--green ribbon

Color of ribbons have been designated if one wishes to award cloth or paper ribbons to winners. A card describing the event and place won may also be given as recognition of achievement.

Starts

Due to a wide difference in anatomical proportions among participants, there is a great variance in starting positions. The height of the sprinter usually determines which style or variation of styles he should use. Three main positions are recognized: the bunched, the medium, and the elongated. The bunched position is used mainly by the small participant. The medium starting position is the most widely used.

The runner begins from starting blocks or holes dug for the feet to aid in drive and speed at the take-off. Place the drive leg on the front block. If the runner kicks a football with the right foot, he is right-footed, and his left leg is the drive leg. His other foot, the kicking foot, is placed on the rear block.

A runner can determine his block position in the following way: stand with both heels near the starting line, back to the finish line. Place left foot directly ahead of right with heel to toe. Mark a spot at the middle of the left foot. Move the right foot ahead of left and mark the toe point. The marks represent where the front of each starting block is placed. Minor adjustments can be made if the feet seem too close or too far apart.

For the bunch start, the runner sets the blocks so the front foot is 18 to 20 inches from the starting line and the toes of the rear foot back about ten inches or almost even with the heel of the front. The blocks should not be separated sidewise more than a few inches in any type of start, because this has a tendency to throw the sprinter to one side when pushing off.

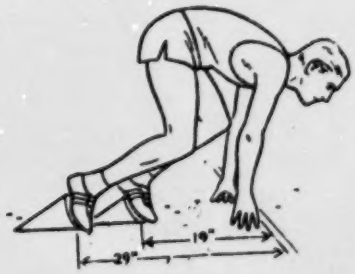

Figure 2

In the medium start, the front foot is placed from eight to 15 inches back and the rear foot is placed so that the knee bisects the front foot and is approximately 32 to 38 inches to the rear.

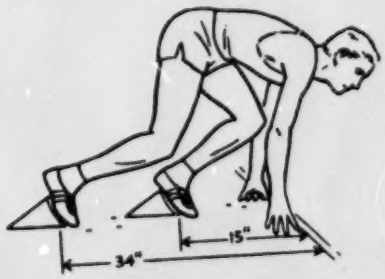

Figure 3

For an elongated start, the rear leg is farther back, so the knee is about even with the ankle of the front foot.

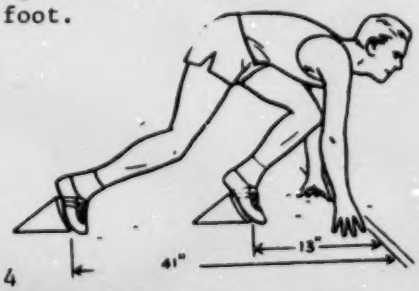

Figure 4

Regardless of the position of the feet, the body and hands are placed about the same.

The Crouch--one leg comfortable in front of the other. Hips slightly higher than shoulders. Hands shoulder distance apart with fingertips resting on ground. Reach forward with opposite arm of drive leg. The body is bent forward so the shoulders are almost straight above the hands.

The standing start is used when the runner does not want to take a lead position of the race. He leans slightly forward with feet comfortably spread, arms in opposition to legs. The initial push is from the forward leg as the back leg steps out; arms continue coordinated opposition movements.

Figure 5 The Standing Start.

On your mark. Place the front foot 12 to 15 inches back of the hands with the toe pointing straight ahead. Place the rear foot so that the knees bisects the front foot and is about 30 to 34 inches to the rear. Place the fingers and thumbs in a tripod position on the starting line about shoulder width apart. The head should move down as the buttocks are raised, so that there is not tension in the neck. Focus the eyes on the ground immediately in front of the starting line.

Figure 6

Get set. To get set means to distribute the weight of the body in the best possible position to take off. To assume this position the sprinter raises his hips until they are about 20 degrees above his shoulders and the weight is over the arms. His eyes are focused just ahead of the starting line. Concentration at this point should be on the rear leg and opposite arm.

Figure 7

Go. As the gun sounds, drive forward. Thrust hard with the front, drive leg, bringing the rear foot rapidly forward at the same time--barely clearing the ground. Remember, drive forward, not up.

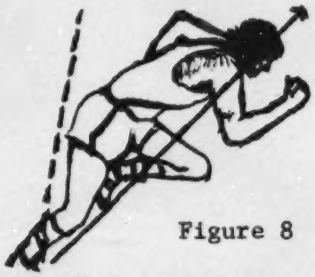

Figure 8

If the weight is well forward, as it should be, the first steps will be short. A long first step checks the forward momentum. Pump the arms hard at the start. Each arm swings out with the opposite leg, in the natural way. But the arm swing is exaggerated, a hard piston-like motion that compensates for leg drive. Shoulders move forward and slightly up as the head and chest rise with the first strides until the runner is at proper sprinting in six or seven steps.

In this normal running position the arm action should become natural and relaxed. Be sure the arms swing in the direction of the run. A diagonal swing causes a jerky motion that wastes strength and checks speed.

Once in full stride, the body must maintain a definite forward lean without weaving or wobbling from side to side.

The Finish. There's a technique to finishing too. The sprinter makes the best finish if he assumes the finish line is ten yards beyond the tape. He should run through the tape, not jump into it. There are many fancy, driving finishes displayed on the tracks each year. They make nice pictures but often lose races. ABOVE ALL HE SHOULD NOT BREAK STRIKE OR PULL HIS CHEST BACK BY RAISING HIS ARMS OVER HIS HEAD.

Dashes or Sprints

Dashes or sprints - a short distance run.

Suggested Distances

20 yards--Grade 1
30 yards--Grade 2
40 yards--Grade 3
50 yards--Grade 4
60 yards--Grade 5
75 yards--Grade 6
100 yards--Grades 7 and 8

Basic Rules

1. Starter cannot touch on or over the line before firing of gun.
2. Must stay in lane.
3. Two false starts disqualify the runner.

Safety Instruction

1. Warm up thoroughly before starting.
2. Don't jump through the finish tape.
3. Don't practice starts when stiff.

Helpful Hints

1. Run out of the blocks, don't jump.
2. Get to running position as soon as possible.
3. Relax, don't tighten neck muscles.

More Starts

Standing start: This start is recommended for elementary school children as the majority will be running in tennis shoes. The runner places the feet in a comfortable position, one foot slightly back of the other, and arms in opposition. The runner leans forward slightly and, at the gun signal, takes off with the back foot.

Figure 9

Crouch start: Starting must be adapted to each runner because body measurements vary as to trunk, leg, and arms (see Starts).

Figure 10

The crouch start is the best method for a fast get-away in the sprints. At the signal, "Take your mark," the left or front foot is placed about ten to twelve inches behind the starting line. The right or rear foot is placed approximately next to the heel of the left foot. A comfortable position is

taken with hands shoulder-width apart, fingers extended and together behind the starting line. On "Get set," the hips are raised so that the back is parallel to the ground. The body weight is balanced mostly on the hands. Caution beginners to hold still until the signal "Go!" Upon the words "Go" or the sound of the whistle, the run is started by a push off from the toes to overbalance the body weight forward. The runner keeps the body low leaning forward but not bending at the waist. He uses short, hard, driving steps and a powerful swing of both arms to regain balance and pick up speed. In full stride, the knees should be lifted high and brought down forcefully, the toes pointed straight forward, and the arms bent at the elbow and moved back and forth forcefully. His head should not rotate from side to side. About ten yards from the finish line the runner should lean forward slightly to initiate a final burst of speed. He should cross the finish line at top speed and run about ten yards beyond the line. Most runners have a tendency to slow down at the finish.

Distance Running

As the distance increases, the runner assumes a more erect posture, his strides become shorter, and his heels assist in supporting his weight.

A good rule to follow in preparation for competition is to run more than your distance to develop endurance and to run less than a quarter mile to develop speed.

Scores are recorded in minutes and seconds.

Jogging

Jogging is a run-walk combination done for one mile against one's own time. It is not a competitive race. Each individual should be timed after several sessions of untimed distance jogging, and each strive to increase the amount of running he does, instead of run-walk. He should also try to jog a mile in less than the 12 minutes allowed for his first attempt.

Baton Exchange

The baton can be passed in a number of ways. The underarm extension or the V pass is best for elementary school children. The baton should be passed with the left-hand and received with the right. Each receiver must change the baton from his receiving right-hand to his passing left one as he is running.

Figure 12

If the baton is not successfully exchanged in the area the team is handicapped by time lost.

There are two general types of passing (exchanging) the baton, the visual pass and the blind pass.

The Blind Pass is used in relays where the runner is coming in fast and the success of the relay often depends upon a fast exchange. The outgoing runner must judge the speed of the incoming man and take off as he hits a given mark (six to 18 yards back of the pass zone). They then exchange the baton at a given point without the receiver looking back. The exchange is made by the incoming runner extending the baton forward as far as possible with the left-hand and lifting it up to his teammate's right-hand, which has been extended backward, palm back and thumb extended. It can also be received with the palm up; the incoming runner places the baton downward into the receiver's hand. The receiver then transfers the baton to his left-hand before the next exchange.

Blind exchanges with the receiver facing forward:

Basket Pass. The receiving runner places fingertips on hips, elbows out at the side. The baton is placed in the open palm by a downward motion.

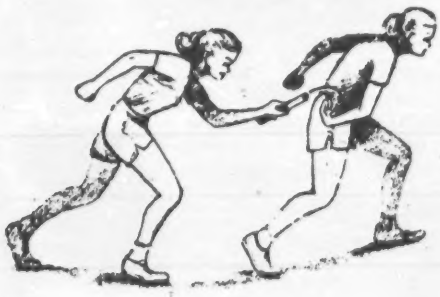

Figure 12

Inverted Basket Pass. The receiver's thumb is on the hip, palm open, fingers spread out and down. Baton is placed in the palm by an upward swing.

Figure 13

Underarm Extension Palm up Pass. The arm is extended to the rear, palm up. The baton is placed by a downward motion.

Underarm Extension Palm Backward Pass. The arm and hand extend to the rear with thumb and fingers spread so the palm is toward the oncoming runner. The baton is placed in the "V" of thumb and forefinger on upward swing.

Underarm Extension Palm up Pass.

Figure 14

The Visual Pass. This is used for all of the longer relays in which the incoming runner is tired and uncertain of his coordination. He should extend the baton forward as far as possible with his left-hand and the receiver should adjust to his teammate's speed and grasp the baton with his right-hand (palm up or down). Sureness of the pass exchange is more important than speed in this type of relay. This is the most popular pass for beginners.

Visual exchanges with the receiver facing the approaching runner are:

Overarm Extension Palm up Pass. Arm of the receiver is palm up reaching back as the runner places the baton with a downward swing.

Overarm Extension Palm up Pass.

Figure 15

Overarm Extension Palm Outward. The receiving thumb and fingers are extended with palm out to receive the baton passed perpendicular to the ground.

Overarm Extension Palm Outward Pass

Figure 16

Underarm Extension Palm Backward Pass. Executived just as the blind underarm extension. This is an excellent pass for beginners as the movements are simple and familiar.

After grasping the baton securely, the runner transfers it to her left-hand if she is to pass to another runner.

Relays

Relays are an American innovation which require running skill and ability to receive and exchange a baton. The team event is run in "legs" with each member running one-fourth of the distance of the race and receiving and/or passing the baton with a 22 yard transfer area.

All of the techniques of starting and sprinting apply in the short distance pursuit and shuttle relays.

Pursuit Relay

In a pursuit relay, runners run in the same direction on the straight or oval track. Teams consist of four runners each running an equal distance. It is recommended that from two to four teams compete at the same time. The first member stands at the starting line. All others are stationed at intervals of 30 or more yards around the track. Lead-off runner starts from a crouch position. The race is started in the manner as the dash. Runners run to the next position where they pass batons to respective teammates. The batons are passed with a 10 to 22 yard zone, and these zones should be on straightways rather than on the curve of the track. The receiver of the baton assumes a stance near the back line of the passing zone. On a signal from the passer, the receiver starts to run. He receives the baton with the right-hand cupped with fingers spread to side of the body. He grips the baton tightly as it touches the hand. The baton is shifted to the left-hand as quickly as possible after receiving it. The passer of the baton extends the left arm and reaches as far forward as possible. He holds the baton near the end. A cue is "Give the receiver the by end of the stick." The baton must be extended at the proper height for the exchange, and some pressure exerted on the hand of the receiver so that he will know the baton is there. The passer runs near the receiver and continues to run several yards beyond the place of exchange.

Shuttle Relay

A shuttle relay involves a team traveling over and back across the same ground. The shuttle relay can be used with the shorter distance as a training event.

The visual exchange is recommended for the elementary level. When the approaching runner is five to seven yards away, the receiver should start running, looking back with the right arm extended backward, hand open and palm up to receive the baton.

The initial runner may use the standing or crouch start and carries the baton in the left-hand.

Baton passing is more difficult in shuttle relays and beginners should use a hand touch in preference to a baton. The runner is in standing

position with right arm extended parallel to the starting line awaiting a touch from the oncoming runner. The incoming runner slaps the baton across the palm of the receiver between the thumb and forefinger.

HURDLING:

Basic Rules

1. May not allow any part of the body to get outside own hurdle.
2. May knock any number of official hurdles down.

Safety Instruction

1. Warm up and stretch well before hurdling.
2. Never take hurdles slowly.
3. Never try to clip the low hurdles too low.
4. Keep lead leg straight.

Helpful Hints

1. Practice with arms forward.
2. Practice with correct number of steps always.
3. Don't let head rear back.

This activity is best for sixth grade on up.

The first step in learning to hurdle is to sit on the ground in a hurdling position.

After having mastered the hurdling position (which is often difficult for those who are not supple), it is then necessary to practice taking up a hurdle.

The hurdles should be 20 inches high. Place four hurdles at a distance of 50 yards.

At first, the hurdler should try to get over any way possible, then learn to assume the ground-hurdling position just practiced. After form and one hurdle have been learned, he should practice taking two or more and then learn the proper steps.

Good hurdling depends upon the ability to start fast and to generate top sprinting speed. Ten steps are taken to the first low hurdle, and seven in between. Good form for the low hurdles requires that the body not be raised as it passes over the hurdle.

Injury is more likely when the hurdler balks or slows up to take the hurdle so it is wise to approach them fast. The three steps between hurdles are very difficult and can be learned only after achieving good form over the hurdle and by making a big first step after landing.

In the primary and intermediate grades, hurdling can be taught as a leap over the hurdle while running and not breaking the run. Emphasis should be placed on bringing the lead leg high and straight out in front of the body. Very short hurdles which fall off their supports easily should be used. They may be as simple as a thin dowel laid between two

cardboard boxes, or even thin cardboard boxes. The first few lessons in hurdling should be conducted on the grass.

The regular hurdle is done in the following manner. The take-off begins about three to four feet in front of the hurdle, with the lead leg kicking straight up in front of the body. At the same time the leg is kicked up, the arm(s) are thrust forward to give more lift to the body.

In the sprint hurdling the lead arm swings in opposition to the lead leg and extends with the body thrust. In a double arm thrust both arms move forward with the step and reach of the lead leg. Simultaneous movement of both arms gives more leverage and force across the hurdle, but places the arms out of position for the thrusting force on the first step from the hurdle. A good way to learn to control the arms (so they don't fly to the side) is to lock the thumbs, with the arms forward, while hurdling, until body control is learned.

The hurdler strives to keep his body straight (shoulders square with the hurdle) and takes the hurdle in stride. The lead leg stretches forward as far as possible. As the lead leg crosses the hurdle, the trailing leg is bent with the knee pointing directly to the side. The toe of the trailing leg must be raised high enough to clear the hurdle. The lead leg is brought down and touches the ground as close to the hurdle as possible. As the lead leg starts down, the trailing leg comes around and takes the first step toward the next hurdle. The faster the foot touches the ground the quicker the move toward the next hurdle. An uneven number of steps should be taken between hurdles so that the lead leg is consistent over each hurdle.

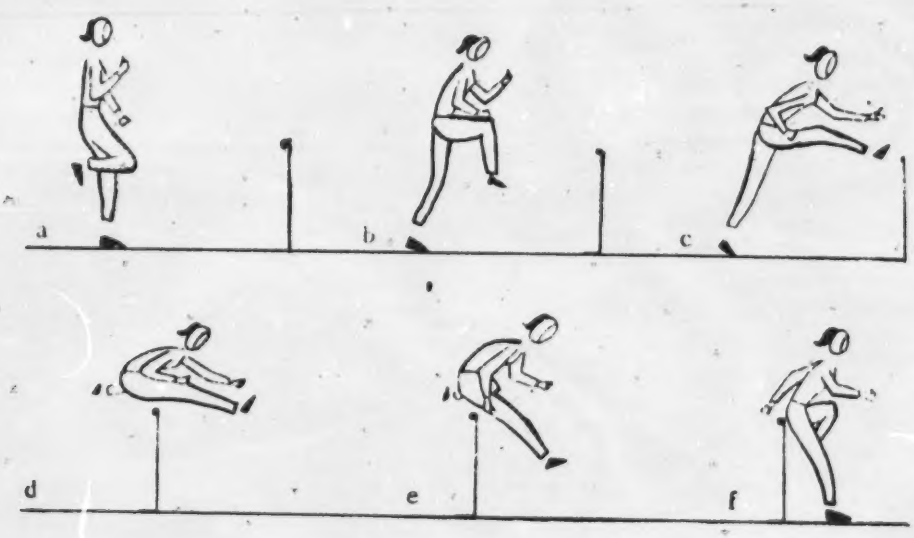

Figure 17

Common Faults

1. Failure to raise leg high enough and keep it straight.
2. Failure to use arms to add lift.
3. Failure to bring lead leg down fast once it has crossed the bar.
4. Failure to keep knee of trailing leg pointed to the side.
5. Letting foot of trailing leg drop and catch bar.
6. Failure to bring trailing leg around in order to take the first step toward the next hurdle or finish line.

THROW FOR DISTANCE:

Use a ball that can be held in the hand, preferably a softball. Use markers placed on the spot where the ball first touches the ground to compare or measure distances.

Basketball

The hurler stands with feet apart and body at right angles to the delivery line. An official basketball is held by the right hand and supported by the wrist and fingers. As the body bends backward the left leg and arm extend and the right knee bends. The body weight transfers to the left foot before the right arm and wrist whip through. Reverse follows. Steps may be taken in the deliver.

Football

The ball should be gripped lightly behind the middle with the fingers on the lace. The thumb and fingers should be relaxed. Right-handed throwers should place the left foot pointing in the direction of the pass with the body turned sidewards. The eyes should be kept on the target. The ball should be brought back by the ear with the throwing arm, as the weight is shifted to the back foot. Both knees are slightly bent. As the weight is transferred to the forward foot, thrust the ball toward the target. (Nose of ball is slightly tilted.) Release the ball with a wrist snap which carries fingers downward and projects ball in a spiraling motion.

Softball

This throw may be done with any form and from a stand, run, or step-hop. The approach adds more momentum to the throw. The preferred overhand throw begins by facing the throwing line with the left foot slightly in front (for right-handed throwers). The body leans backward, rotating slightly to the right. The right knee flexes as the bent right arm comes back to a position parallel to the ground. The left arm is up for balance. The body braces against a firm left leg and the right arm follows with a whip-like motion and a flick of the wrist and fingers.

SHOT PUT:

Basic Rules

1. Touching on top or outside the circle or toeboard with any part of body before throw is measured is a foul.
2. Four preliminary throws are allowed and two or three allowed those who qualify for finals.

Safety Instruction

1. Practice in a secluded place.
2. Never throw when young children are around.
3. Roll the shot back to the circle---don't throw it back.

Helpful Hints

1. Keep the shot on a straight upward angle line during delivery.
2. Speed across the circle is most important.
3. Deliver with a pumping motion and snap at end with hand and wrist.

Four-to eight-pound shots may be used from the fifth grade on. The shot is pushed rather than thrown.

The following description is for a right-handed delivery.

The shot is held in the right-hand at the base of the three middle fingers and is balanced on the side by the thumb and little finger. The elbow is bent and away from the body. The shot is rested against the neck and collar bone and is nestled into the side of the chin. The head should be held erect. The thrower stands with his left side to the intended target. The feet are spread about shoulder width apart with the weight on the right foot. The left arm is raised for balance. The left leg is swung across the body and then forward. A short hop is taken with the right foot and as the left foot hits the ground, the body rotates forward. The right arm pushes the shot forward with the body until the body weight is over the left foot. The elbow is straightened, and wrist and fingers extend to propel the shot forward and upward. The left leg and arm swing on around, and all of the body weight is taken on the left foot.

The shot put.

Figure 18

Common Faults

1. Throwing the shot rather than pushing it.
2. Failure to keep sustained movement of the whole body until shot has been released.

Key Teaching Phases

1. Rest shot in hand at base of fingers. Balance it with the thumb.
2. Tuck shot into neck.
3. Elbow bent and away from the body.
4. Swing left leg across body then forward.
5. Hop on right foot.
6. As left foot hits ground twist body.
7. Push shot forward and upward.
8. Follow around with left leg and arm. Take weight on left foot.

Discus Throw

Place the discus on the palm of the right hand barely hooking the end joints of the fingers over the rim, and extend the thumb across the center with the back rim resting against the inside of the wrist. Hand positions are modified for larger hands by placing more of the fingers over the rim with palm behind the center.

Figure 19

Beginners should master the standing throw first. Turn the left side of the body toward the direction of the throw. Feet are comfortably spread. Transferring the weight alternately, the right arm swings backward with palm up and forward across the body with the left hand holding the discus in the parallel swing. With bent relaxed knees, the weight shifts to the right foot as hips and shoulders twist right. Head and chest are up. With a quick swing of the body left and an easy arm swing, the discus is released as the legs push the body to an erect position. The throwing arm continues up and around in a follow-through. In a vigorous throw, the hurler may be carried into a half turn so her right foot ends where the left one was at the start.

Figure 20

To get more power in the throw, shift weight from right to left foot, step across in a semi-crouched position so right foot comes in front of the left. The left foot snaps around in front toward the line. The feet and legs are braced as the arm whips through, and the wrist snaps releasing the discus slightly ahead of the shoulder with a clockwise spin. As the throw is made the left arm whips back and the chest is lifted. The reverse follows the release.

RUNNING BROAD JUMP:

Basic Rules

1. Touching in front of the scratch line or passing line extended shall count as a foul and trial.
2. The jump shall be measured at right angles to the board and point of landing closest to take-off.

Safety Instruction

1. Warm up gradually--take short, easy jumps at first.
2. Keep landing pit or mats smooth and soft.

Helpful Hints

1. Run far enough to get up speed.
2. Work for height.
3. "Throw the belly out" on take-off.
4. Fight for distance just as you go to land.

Success or failure in the running broad jump depends upon the two factors of speed and spring.

The running broad jump consists of four elements--a fast run (approach), a high jump (take-off), flight and landing--which can be learned separately but executed as one whole action.

The runner finds the starting position by standing on the take-off board with both feet and stepping out with the foot opposite the desired take-off foot. Run 16 to 20 full strides while someone counts the sixth, twelfth, and sixteenth strides. Mark these check points and use them to standardize the stride and determine speed and take-off position. Begin the approach on the take-off foot, sprint forward and hit the take-off board with the heel your stronger foot first. The leg straightens and the body rocks over the foot as the toe and ankle aid the drive of the take-off leg. The jump must be high. The arms as well as the legs should be swung upward and/or forward to gain power. When the top of the jump is reached, the jumper is in a sitting, running, or layout position in the air. Upon landing the arms are snapped back to insure forward motion. The runner should reach forward on landing.

Three of the most common types of running broad jumps are the float, the hitch-kick, and the hang.

The hitch-kick is executed by sticking out the stomach when taking off and then running in the air with one and a half steps, while the arms

are flung vigorously above the head, in opposition to the legs and are pulled down and back just before the feet come together for a landing.

Figure 21

In the float, the legs are tucked up, knees to chest, and the arms held over head until just before landing when they are brought down and back to add distance. At the same time the feet are thrown forward to land.

Figure 22

The hang-style is performed by delaying the leg action. After the jumper has reached top flight, the legs are swung forward.

Figure 23

The long jump is a dangerous event, being particularly hard on the take-off foot and ankle. It must, therefore, not be practiced at top speed too often and the warm-up must be thorough.

HIGH JUMP:

Basic Rules

1. Three trials allowed at each height.
2. Must jump from one foot.
3. Displacing bar, passing under it, crossing line of bar extended, or leaving ground shall constitute a trial.

Safety Instruction

1. Learn to land on a foot or feet, not hands or body.
2. Don't jump when take-off is slippery.
3. Always fix pit or mats for landing safely.

Helpful Hints

1. Learn to kick the lead leg.
2. Stand up and jump--don't lie down to jump.
3. Run easy and relax for jump.

High Jump

All children enjoy jumping, but the child with long thighs and limber hips will excel in this event. The scissors jump will be enjoyed most by this age level, though it has been replaced in high school and college competition by the western roll, the straddle roll, and the "Fosbury Flop." Despite Fosbury's Olympic triumph in 1968 at Mexico City, not many jumpers have been able to master the technique. It is considered too dangerous to be used by elementary school children.

Standing High Jump

In a standing high jump, the jumper stands sideways to the cross bar and uses the foot away from the bar for the take-off. With maximum effort, the leg next to the bar is thrown forward, up, and over. The take-off foot trails the inside leg. Arms should assist during the jump. As the jumper improves in body control, he may, after the take-off, throw his head back to raise the buttocks in clearing the bar. He can also either roll away from the bar or cut back to face the bar, depending on which form is easier. This basic jump, the scissors jump, is the one most used by elementary school children.

Running High Jump

The take-off for the running high jump is generally the same as for the standing high jump. Height is gained by using a running approach, which may be from the right or left side, according to the preference of the performer.

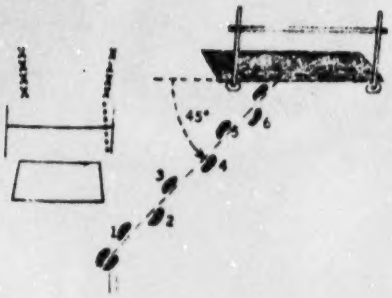

Figure 24

Scissors Jump

The child should be allowed and instructed to follow his natural urge to approach the bar from either the left or the right. The jumper stands at a 45-degree angle to the bar and runs to gain momentum. The number of steps required will depend upon the size of the jumper, i.e., seven, nine, or as many as 11 steps. The run is easy, and the last stride is usually lengthened to give more room for an upward swing of the leg. The take-off must be made very close to the bar. Practice may be initiated by jumping over a pole or line on the floor. The take-off is made from the outside foot. The inside leg is kicked up in front of the body and forward over the bar. The spring is achieved from the take-off foot, the lift of the arms, and the vigorous upward swing of the inside foot. The landing is made on the lead leg, facing the same direction as at the beginning of the jump.

Figure 25

Western Roll

The take-off is made with the foot nearest the cross-bar. In this style, clearance is made with the side of the body next to the bar.

As the jumper leaves the ground, the lead leg, head, and arms will cross the bar first while the take-off leg is pulled up under the lead leg. This leg is pulled very tight into the body with the knee close to the chest.

As the arms, head, and shoulders cross the bar they are immediately dropped toward the landing pit. The dropping of the above parts aids in clearance of the hips over the bar because the hips are pushed up and away from it.

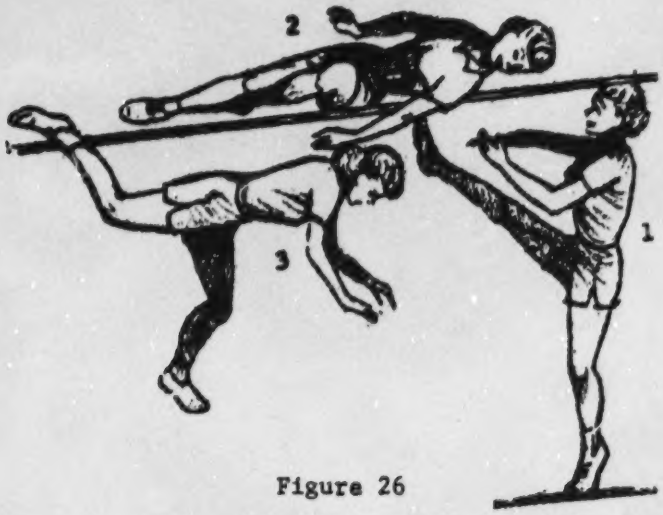

Figure 26

The landing is made on the take-off foot and both hands. The knee, wrists, and elbows flex as the body's weight is received upon these parts in order to ease the impact of landing.

Straddle Roll

The leg nearest the cross-bar is also used as the take-off leg in the straddle roll; however, the body rotates the bar in a face down position.

During the take-off, the foot of the lead leg swings as high as the cross-bar before the supporting foot leaves the ground, at the same time the arms swing up in order to contribute to the explosive lift of the body. At the height of the jump the outside arm reaches across the bar toward the pit. The head and shoulders follow the path of this arm by dropping toward the pit.

The legs remain separated as the body rotates around the bar. In fact, a "V" is formed between them during this action. In order for the take-off leg to clear the bar, the knee and foot are rotated away from the bar, or they are entended up and back.

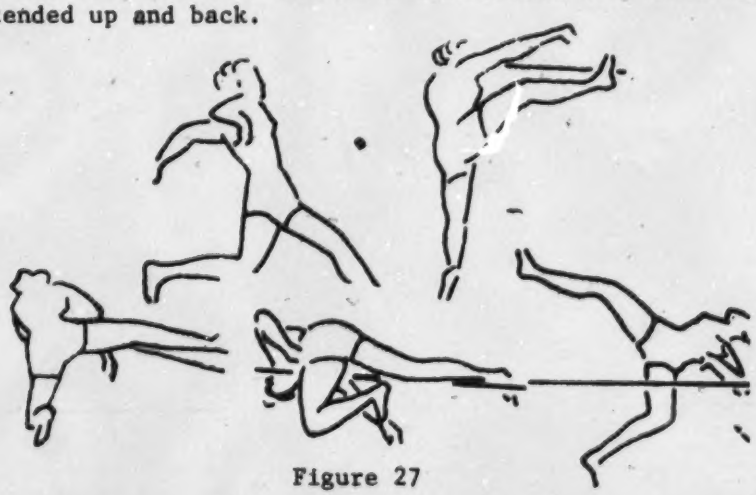

Figure 27

If a sawdust pit is used, a three point landing is recommended. The impact is taken on both hands and the lead leg; however, if the jumper is

landing in a foam rubber pit, he should learn to land on his back or side by slowly rotating his head to look at the sky just after crossing the bar. This movement of the head creates a turning effect with the body.

Hop, Step, and Jump

One must start at a given measured distance and gather as much speed as can be "handled" in the approach to the take-off board. He then hops off his stronger leg (usually the left), landing on the same. He then takes a step, landing on the opposite foot (usually the right). He then jumps off this (right) foot into the landing pit. Normally, the hop and the jump are of about equal length, while the step is always smaller.

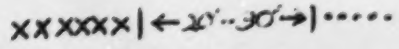

Figure 28

Beginners find it difficult to learn to hop (they usually try to step) as they hit the take-off board.

Measurement is taken wherever the back of the heel strikes the floor. If the contestant should fall back on his hands, or sit down at the completion of his jump, the jump is measured from whatever part of the anatomy is closest to the starting line.

Flexed-Arm Hang

Equipment: A horizontal bar approximately one and one-half inches in diameter is preferred. A doorway gym bar can be used; if no regular equipment is available, a piece of pipe can serve the purpose. A stop watch is needed.

Description: The height of the bar should be adjusted so it is approximately equal to the pupil's standing height. The pupil should use an overhead grasp. With the assistance of two spotters, one in front and one in back of pupil, the pupil raises her body off the floor to a position where the chin is above the bar, the elbows are flexed, and the chest is close to the bar. The pupil holds this position as long as possible.

Figure 29

The stop watch is started as soon as the subject takes the hanging position.

The watch is stopped when (a) pupil's chin touches the bar, (b) pupil's head tilts backwards to keep chin above the bar, (c) pupil's chin falls below the level of the bar.

Scoring: Record in seconds to the nearest second the length of time the subject holds the hanging position.

Jump and Reach

The jumper reaches high, with both hands held together and makes a mark on the wall with the chalk. He then stands sideways to wall with the chalk held in the hand next to wall. As he swings both arms vigorously, he jumps in the air. At the highest point of the jump, he makes a second chalk mark on the wall. His record is the distance between the two marks. Record the score and each time the student jumps, he tries to better his own record.

Pull Ups

Equipment: A metal or wooden bar approximately one and one-half inches in diameter preferred. A doorway gym bar can be used, and if no regular equipment is available, a piece of pipe or even the rungs of a ladder can also serve the purpose.

Description: The bar should be high enough so that the pupil can hang with his arms and legs fully extended and his feet free off the floor. He should use the overhand grasp.

After assuming the hanging position, the pupil raises his body by his arms until his chin can be placed over the bar and then lowers his body to a full hang as in the starting position. The exercise is repeated as many times as possible.

The body must not swing during the execution of the movement. The pull must in no way be a snap movement. If the pupil starts swinging, check this by holding your extended arm across the front of the thighs.

The knees must not be raised and kicking of the legs is not permitted.

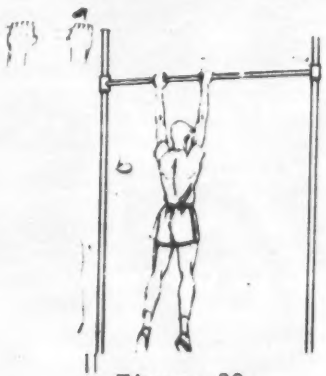

Figure 30

Scoring: Record the number of completed pull-ups to the nearest whole number.

ROPE CLIMBING:

Rope climbing offers high developmental possibilities for the upper trunk and arms, as well as good training in coordination of the different parts of the body. Adequate grip and arm strength are necessary prerequisities to climbing. Becoming accustomed to the rope and gaining in confidence are important goals in early work on the ropes. Many children need to overcome a natural fear of height.

Safety in Rope Climbing

1. Mats should be under all ropes.
2. The hand-over-hand method should be used for climbing and the hand-under-hand method for descending.
3. Children should be cautioned not to slide, or they may get rope burns on the hands and skinned places on the leg.
4. If a climber becomes tired, he should stop and rest. Proper resting stops should be taught with the climbing.
5. Always leave enough margin to descend safely. No child should go higher than his strength will allow.
6. A spotter should hold the rope steady while the child climbs.
7. Resin in powdered form and magnesium chalk are aids to better gripping. It is particularly important they be used when the rope becomes slipperly after use.
8. Marks to limit the climb can be put on the rope with adhesive tape. A mark eight to ten feet above the floor is the limit for all children until they can demonstrate sufficient proficiency to be allowed to climb higher.

Rope Climbing

Rope climbing looks difficult but can be fun and safe. At the start, students should only travel a few feet and descend. Never slide down a rope, because severe rope burns can result in permanent injury.

1. Stand close to rope and grasp with both hands, one above the other. Place one foot on top of other and grip rope between calves and shins. Hips are now in a sitting position and arms are straight. Practice until climber can hold position securely without slipping.
2. Straighten legs and bend elbows.
3. Reach up with hands and draw legs to position one. Repeat twice.
4. Descend by taking position three with body close to rope. Alternately lower hands on rope as the leg grip is released to allow a slow descent. The feet clamp to control the downward movement.

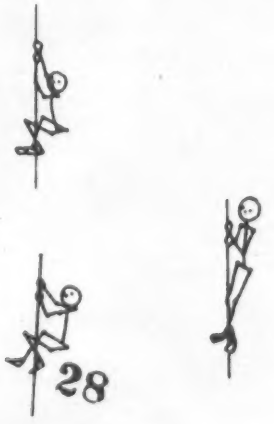

Figure 31

After children have mastered climbing a short distance on the rope, the following goals are established:

1. climb halfway,
2. climb three-quarters of the way, and
3. climb to the top mark.

A top mark should be established beyond which the children should not be permitted to climb.

Other Climbing Activities

1. Climbing for Time. A stopwatch and a definite mark on the rope are needed. The height of the mark will depend upon the children's skill and capacity. Each child should have three trials (not in succession, however) and the best time is recorded as his score. He should start from a standing position with hands reaching as high as he wishes. The descent should not be included in the timing, as too much emphasis on speed in the descent causes children to drop from too great a height or promotes rope burns on the hands and other parts of the body.

2. Climbing Without Using the Feet. This strenuous activity should be attempted only by the more skillful. During early sessions the mark set should not be too high. Start from a sitting position. This can also be timed.

SHUTTLE RUN:

Equipment: Four blocks of wood, 2 inches x 2 inches x 4 inches, and stopwatch. Pupils should wear sneakers or run barefoot.

Two parallel lines are marked on the floor 30 feet apart. The width of a regulation volleyball court serves as a suitable area. Place the blocks of wood behind one of the lines. Two students start from behind the other line. On the signal "On Your Mark, Get Set, Go:" (the timer starts the watch on Go), the students run to the blocks or erasers, pick one up, run back to the starting line, and place the block NOT THROW behind the line--not on it or over it. He then runs back and picks up the second block which he carries back across the starting line moving as rapidly as possible. The timer stops the watch as the first foot or body part crosses the finish line. To eliminate the necessity of returning the blocks after each race, start the races alternately, first from behind one line and then from behind the other.

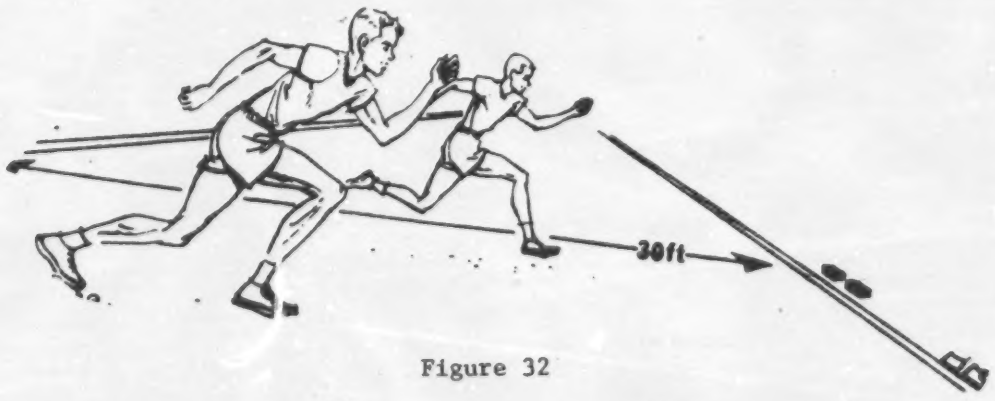

Figure 32

Scoring: Record the time to the nearest tenth of a second.

SIT-UPS (Flexed Leg):

Equipment: Clear floor, mat or dry turf, and stopwatch.

Description: The pupil lies on his back with his knees bent, feet on the floor and heels not more than 12 inches from the buttocks. The angle at the knees should be less than 90 degrees. The pupil puts his hands on the back of his neck with fingers clasped and places his elbows squarely on the mat, floor or turf. His feet are held by his partner to keep them in touch with the surface. The pupil tightens his abdominal muscles and brings his head and elbows forward as he curls up, finally touching elbows to knees. This action contitutes one sit-up. The pupil returns to the starting position with his elbows on the surface before he sits up again. The timer gives the signal "ready-go," and the sit-up performance is started on the word "go." Performance is stopped on the word "stop." The number of correctly executed sit-ups performed in 60 seconds shall be the score.

No resting between sit-ups is permitted.

No sit-ups shall be counted in which the pupil does not (a) keep the fingers clasped behind the neck; (b) bring both elbows forward in starting to sit up without pushing off the floor with an elbow; or (c) return to starting position, with elbows flat on the surface, before sitting up again.

Figure 33

Scoring: Record the number of correctly executed sit-ups the pupil is able to do in 60 seconds. A foul nullifies the count for that sit-up. The watch is started on the word "go" and stopped on the word "stop."

STANDING BROAD JUMP:

Equipment: Mat, floor, or outdoor jumping pit, and tape measure.

Description: The student should start behind, not on or over, starting line with the feet several inches apart.

Preparatory to jumping, the pupil swings the arms backward and bends the knees.

The take-off is made by simulteanous drive and spring from both legs as the arms swing upward lifting the body. At the height of the jump the arms are forward, heels near hip height as the upper part of the body leans forward. The arms are swung forward so upon landing the fall will be forward not backward.

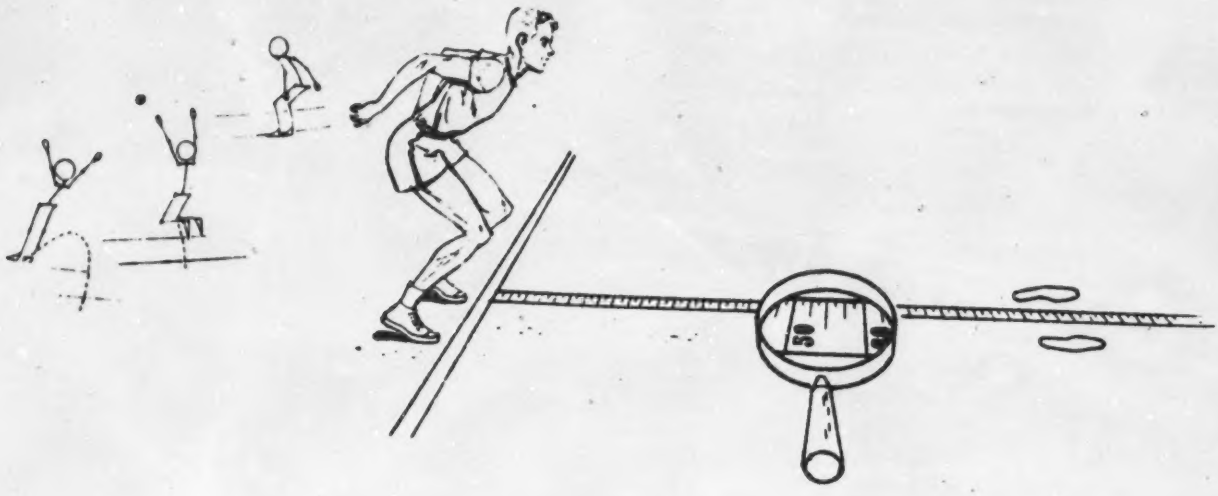

Figure 34

Each student should jump a distance equal to his height.

Measure from the take-off line to the heel or other part of the body that touches the floor nearest the take-off line.

When the test is given indoors, it is convenient to tape the tape measure to the floor at right angles to the take-off line and have the pupils jump along the tape. The scorer stands to the side and observes the mark to the nearest inch.

Scoring: Record in feet and inches to the nearest tenth.

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